

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: Trustees of the University of Pennsylvania
Wilson, James M.
Fisher, Krishna J.
- (ii) TITLE OF INVENTION: Method for Recombinant Adeno-Associated
Virus-Directed Gene Therapy
- (iii) NUMBER OF SEQUENCES: 4
- (iv) CORRESPONDENCE ADDRESS:
(A) ADDRESSEE: Howson and Howson
(B) STREET: Spring House Corporate Cntr, PO Box 457
(C) CITY: Spring House
(D) STATE: Pennsylvania
(E) COUNTRY: USA
(F) ZIP: 19477
- (v) COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30
- (vi) CURRENT APPLICATION DATA:
(A) APPLICATION NUMBER: WO
(B) FILING DATE:
(C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: US 08/708,188
(B) FILING DATE: 06-SEP-1996
- (vii) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: US 08/729,061
(B) FILING DATE: 10-OCT-1996
- (viii) ATTORNEY/AGENT INFORMATION:
(A) NAME: Kodroff, Cathy A.
(B) REGISTRATION NUMBER: 33,980
(C) REFERENCE/DOCKET NUMBER: GNVPN.019CIP2PCT
- (ix) TELECOMMUNICATION INFORMATION:
(A) TELEPHONE: 215-540-9200
(B) TELEFAX: 215-540-5818

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10398 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: unknown
- (ii) MOLECULE TYPE: cDNA

09242977-022699

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

GAATTTCGCTA GCATCATCAA TAATATACCT TATTTTGGAT TGAAGCCAAT ATGATAATGA 60
GGGGGTGGAG TTTGTGACGT GGC CGGGGC GTGGGAACGG GCGGGGTGAC GTAGTAGTGT 120
GGCGGAAGTG TGATGTTGCA AGTGTGGCGG AACACATGTA AGCGACGGAT GTGGCAAAAG 180
TGACGTTTTT GGTGTGCGCC GGTGTACACA GGAAGTGACA ATTTTCGCGC GGTTTTAGGC 240
GGATGTTGTA GTAAATTTGG GCGTAACCGA GTAAGATTG GCCATTTTCG CGGGAAAAC 300
GAATAAGAGG AAGTGAAATC TGAATAATTT TGTGTTACTC ATAGCGCGTA ATATTTGTCT 360
AGGGAGATCT GCTGCGCGCT CGCTCGCTCA CTGAGGCCGC CCGGGCAAAG CCCGGGCGTC 420
GGGCGACCTT TGGTCGCCCC GCCTCAGTGA GCGAGCGAGC GCGCAGAGAG GGAGTGGCCA 480
ACTCCATCAC TAGGGGTTCC TTGTAGTTAA TGATTAACCC GCCATGCTAC TTATCTACAA 540
TTCGAGCTTG CATGCCTGCA GGTCGTTACA TAACTTACGG TAAATGGCCC GCCTGGCTGA 600
CCGCCCCAAG ACCCCCCGCC ATTGACGTCA ATAATGACGT ATGTTCCCAT AGTAACGCCA 660
ATAGGGACTT TCCATTGACG TCAATGGGTG GAGTATTTAC GGTAAACTGC CCACTTGGCA 720
GTACATCAAG TGTATCATAT GCCAAGTACG CCCCTATTG ACGTCAATGA CGGTAAATGG 780
CCCGCCTGGC ATTATGCCCA GTACATGACC TTATGGGACT TTCCTACTTG GCAGTACATC 840
TACGTATTAG TCATCGCTAT TACCATGGTG ATGCGGTTTT GGCAGTACAT CAATGGGCGT 900
GGATAGCGGT TTGACTCACG GGGATTTCCA AGTCTCCACC CCATTGACGT CAATGGGAGT 960
TTGTTTTTGGC ACCAAAATCA ACGGGACTTT CCAAATGTC GTAACAAC TC GCCCCATTG 1020
ACGCAAATGG GCGGTAGGCG TGTACGGTGG GAGGTCTATA TAAGCAGAGC TCGTTTAGTG 1080
AACCGTCAGA TCGCCTGGAG ACGCCATCCA CGCTGTTTTG ACCTCCATAG AAGACACCGG 1140
GACCGATCCA GCCTCCGGAC TCTAGAGGAT CCGGTACTCG AGGAACTGAA AAACCAGAAA 1200
GTAACTGGT AAGTTTAGTC TTTTGTCTT TTATTTTCAGG TCCCGGATCC GGTGGTGGTG 1260
CAAATCAAAG AACTGCTCCT CAGTGGATGT TGCCTTTACT TCTAGGCCTG TACGGAAGTG 1320
TTACTTCTGC TCTAAAAGCT GCGGAATTGT ACCCGCGGCC GCAATTCCCG GGGATCGAAA 1380
GAGCCTGCTA AAGCAAAAAA GAAGTCACCA TGTCGTTTAC TTTGACCAAC AAGAACGTGA 1440
TTTTCGTTGC CGGTCTGGGA GGCATTGGTC TGGACACCAG CAAGGAGCTG CTCAAGCGCG 1500
ATCCCGTCGT TTACAAACGT CGTGA CTGGG AAAACCCTGG CGTTACCCAA CTTAATCGCC 1560
TTGCAGCACA TCCCCCTTTC GCCAGCTGGC GTAATAGCGA AGAGGCCCGC ACCGATCGCC 1620
CTTCCCAACA GTTGCGCAGC CTGAATGGCG AATGGCGCTT TGCCTGGTTT CCGGCACCAG 1680
AAGCGGTGCC GGAAAGCTGG CTGGAGTGCG ATCTTCCTGA GGCCGATACT GTCGTCGTCC 1740
CCTCAAAC TG GCAGATGCAC GGTACGATG CGCCCATCTA CACCAACGTA ACCTATCCCA 1800
TTACGGTCAA TCCGCCGTTT GTTCCACCG AGAATCCGAC GGGTTGTTAC TCGCTCACAT 1860

0924297.02699

TTAATGTTGA TGAAAGCTGG CTACAGGAAG GCCAGACGCG AATTATTTTT GATGGCGTTA 1920
ACTCGGCGTT TCATCTGTGG TGCAACGGGC GCTGGGTCGG TTACGGCCAG GACAGTCGTT 1980
TGCCGTCTGA ATTTGACCTG AGCGCATT TTACGCGCCG AGAAAACCGC CTCGCGGTGA 2040
TGGTGCTGCG TTGGAGTGAC GGCAGTTATC TGGAAGATCA GGATATGTGG CGGATGAGCG 2100
GCATTTTCCG TGACGTCTCG TTGCTGCATA AACCGACTAC ACAAATCAGC GATTTCCATG 2160
TTGCCACTCG CTTTAATGAT GATTTCAGCC GCGCTGTACT GGAGGCTGAA GTTCAGATGT 2220
GCGGCGAGTT GCGTGACTAC CTACGGGTAA CAGTTTCTTT ATGGCAGGGT GAAACGCAGG 2280
TCGCCAGCGG CACCGCGCCT TTCGGCGGTG AAATTATCGA TGAGCGTGGT GGTATGCCC 2340
ATCGCGTCAC ACTACGTCTG AACGTCGAAA ACCCGAAACT GTGGAGCGCC GAAATCCCGA 2400
ATCTCTATCG TGCGGTGGTT GAACTGCACA CCGCCGACGG CACGCTGATT GAAGCAGAAG 2460
CCTGCGATGT CGGTTTCCGC GAGGTGCGGA TTGAAAATGG TCTGCTGCTG CTGAACGGCA 2520
AGCCGTTGCT GATTTCGAGG GTTAACCGTC ACGAGCATCA TCCTCTGCAT GGTCAGGTCA 2580
TGGATGAGCA GACGATGGTG CAGGATATCC TGCTGATGAA GCAGAACAAC TTTAACGCCG 2640
TGCGCTGTTT GCATTATCCG AACCATCCGC TGTGGTACAC GCTGTGCGAC CGCTACGGCC 2700
TGTATGTGGT GGATGAAGCC AATATTGAAA CCCACGGCAT GGTGCCAATG AATCGTCTGA 2760
CCGATGATCC GCGCTGGCTA CCGGCGATGA GCGAACGCGT AACGCGAATG GTGCAGCGCG 2820
ATCGTAATCA CCCGAGTGTG ATCATCTGGT CGCTGGGGAA TGAATCAGGC CACGGCGCTA 2880
ATCACGACGC GCTGTATCGC TGGATCAAAT CTGTCGATCC TTCCCGCCCG GTGCAGTATG 2940
AAGGCGGCGG AGCCGACACC ACGGCCACCG ATATTATTTG CCCGATGTAC GCGCGCGTGG 3000
ATGAAGACCA GCCCTTCCCG GCTGTGCCGA AATGGTCCAT CAAAAAATGG CTTTCGCTAC 3060
CTGGAGAGAC GCGCCCGCTG ATCCTTTGCG AATACGCCCA CGCGATGGGT AACAGTCTTG 3120
GCGGTTTCGC TAAATACTGG CAGGCGTTTC GTCAGTATCC CCGTTTACAG GGCGGCTTCG 3180
TCTGGGACTG GGTGGATCAG TCGCTGATTA AATATGATGA AAACGGCAAC CCGTGGTCGG 3240
CTTACGGCGG TGATTTTGGC GATACGCCGA ACGATCGCCA GTTCTGTATG AACGGTCTGG 3300
TCTTTGCCGA CCGCACGCCG CATCCAGCGC TGACGGAAGC AAAACACCAG CAGCAGTTTT 3360
TCCAGTTCCG TTTATCCGGG CAAACCATCG AAGTGACCAG CGAATACCTG TTCCGTCATA 3420
GCGATAACGA GCTCCTGCAC TGGATGGTGG CGCTGGATGG TAAGCCGCTG GCAAGCGGTG 3480
AAGTGCCCTT GGATGTCGCT CCACAAGGTA AACAGTTGAT TGAAGTGCCT GAACTACCGC 3540
AGCCGGAGAG CGCCGGGCAA CTCTGGCTCA CAGTACGCGT AGTGCAACCG AACGCGACCG 3600
CATGGTCAGA AGCCGGGCAC ATCAGCGCCT GGCAGCAGTG GCGTCTGGCG GAAAACCTCA 3660
GTGTGACGCT CCCC GCCCG TCCCACGCCA TCCCGCATCT GACCACCAGC GAAATGGATT 3720
TTTGCATCGA GCTGGGTAAT AAGCGTTGGC AATTTAACCG CCAGTCAGGC TTTCTTTCAC 3780

AGATGTGGAT TGGCGATAAA AAACAACTGC TGACGCCGCT GCGCGATCAG TTCACCCGTG 3840
CACCGCTGGA TAACGACATT GGCCTAAGTG AAGCGACCCG CATTGACCCT AACGCCTGGG 3900
TCGAACGCTG GAAGGCGGCG GGCCATTACC AGGCCGAAGC AGCGTTGTTG CAGTGCACGG 3960
CAGATACACT TGCTGATGCG GTGCTGATTA CGACCGCTCA CGCGTGGCAG CATCAGGGGA 4020
AAACCTTATT TATCAGCCGG AAAACCTACC GGATTGATGG TAGTGGTCAA ATGGCGATTA 4080
CCGTTGATGT TGAAGTGGCG AGCGATACAC CGCATCCGGC GCGGATTGGC CTGAACTGCC 4140
AGCTGGCGCA GGTAGCAGAG CGGGTAAACT GGCTCGGATT AGGGCCGCAA GAAACTATC 4200
CCGACCGCCT TACTGCCGCC TGTTTTGACC GCTGGGATCT GCCATTGTCA GACATGTATA 4260
CCCCGTACGT CTTCCCAGAG GAAAACGGTC TGCGCTGCGG GACGCGCGAA TTGAATTATG 4320
GCCCACACCA GTGGCGCGGC GACTTCCAGT TCAACATCAG CCGCTACAGT CAACAGCAAC 4380
TGATGGAAAC CAGCCATCGC CATCTGCTGC ACGCGGAAGA AGGCACATGG CTGAATATCG 4440
ACGGTTTCCA TATGGGGATT GGTGGCGACG ACTCCTGGAG CCCGTCAGTA TCGGCGGAAT 4500
TACAGCTGAG CGCCGGTCGC TACCATTACC AGTTGGTCTG GTGTCAAAAA TAATAATAAC 4560
CGGGCAGGCC ATGTCTGCCC GTATTTCCGC TAAGGAAATC CATTATGTAC TATTTAAAAA 4620
ACACAAACTT TTGGATGTTT GGTATTCTT TTTTCTTTTA CTTTTTTATC ATGGGAGCCT 4680
ACTTCCCGTT TTTCCCGATT TGGCTACATG ACATCAACCA TATCAGCAA AGTGATACGG 4740
GTATTATTTT TGCCGCTATT TCTCTGTTCT CGCTATTATT CCAACCGCTG TTTGGTCTGC 4800
TTTCTGACAA ACTCGGCCTC GACTCTAGGC GGCCGCGGGG ATCCAGACAT GATAAGATAC 4860
ATTGATGAGT TTGGACAAAC CACAAC TAGA ATGCAGTGAA AAAAATGCTT TATTTGTGAA 4920
ATTTGTGATG CTATTGCTTT ATTTGTAACC ATTATAAGCT GCAATAAACA AGTTAACAAC 4980
AACAAATTGCA TTCATTTTAT GTTTCAGGTT CAGGGGGAGG TGTGGGAGGT TTTTTCGGAT 5040
CCTCTAGAGT CGAGTAGATA AGTAGCATGG CGGGTTAATC ATTAAC TACA AGGAACCCCT 5100
AGTGATGGAG TTGGCCACTC CCTCTCTGCG CGCTCGCTCG CTCACTGAGG CCGGGCGACC 5160
AAAGGTGCGC CGACGCCCCG GCTTTGCCCG GGCGGCCTCA GTGAGCGAGC GAGCGCGCAG 5220
CAGATCTGGA AGGTGCTGAG GTACGATGAG ACCCGCACCA GGTGCAGACC CTGCGAGTGT 5280
GGCGGTAAAC ATATTAGGAA CCAGCCTGTG ATGCTGGATG TGACCGAGGA GCTGAGGCC 5340
GATCACTTGG TGCTGGCCTG CACCCGCGCT GAGTTTGGCT CTAGCGATGA AGATACAGAT 5400
TGAGGTACTG AAATGTGTGG GCGTGGCTTA AGGGTGGGAA AGAATATATA AGGTGGGGGT 5460
CTTATGTAGT TTTGTATCTG TTTTGCAGCA GCCCGCGCG CCATGAGCAC CAACTCGTTT 5520
GATGGAAGCA TTGTGAGCTC ATATTTGACA ACGCGCATGC CCCCATGGGC CGGGGTGCGT 5580
CAGAATGTGA TGGGCTCCAG CATTGATGGT CGCCCCGTCC TGCCCGCAA CTCTACTACC 5640
TTGACCTACG AGACCGTGTC TGGAACGCCG TTGGAGACTG CAGCCTCCGC CGCCGCTTCA 5700

09242977.022600

GCCGCTGCAG CCACCGCCCCG CGGGATTGTG ACTGACTTTG CTTTCCTGAG CCCGCTTGCA 5760
AGCAGTGCAG CTTCCCGTTC ATCCGCCCCG GATGACAAAGT TGACGGCTCT TTTGGCACAA 5820
TTGGATTCTT TGACCCGGGA ACTTAATGTC GTTTCTCAGC AGCTGTTGGA TCTGCGCCAG 5880
CAGGTTTCTG CCCTGAAGGC TTCCTCCCCT CCCAATGCGG TTTAAAACAT AAATAAAAAA 5940
CCAGACTCTG TTTGGATTG GATCAAGCAA GTGTCTTGCT GTCTTTATTT AGGGGTTTTG 6000
CGCGCGCGGT AGGCCCCGGA CCAGCGGTCT CGGTCGTTGA GGGTCCTGTG TATTTTTTCC 6060
AGGACGTGGT AAAGGTGACT CTGGATGTTT AGATACATGG GCATAAGCCC GTCTCTGGGG 6120
TGGAGGTAGC ACCACTGCAG AGCTTCATGC TGCGGGGTGG TGTGTAGAT GATCCAGTCG 6180
TAGCAGGAGC GCTGGGCGTG GTGCCTAAAA ATGTCTTTCA GTAGCAAGCT GATTGCCAGG 6240
GGCAGGCCCT TGGTGTAAGT GTTTACAAAG CGGTTAAGCT GGGATGGGTG CACACGTGGG 6300
GATATGAGAT GCATCTTGGA CTGTATTTTT AGGTTGGCTA TGTTCACAGC CATATCCCTC 6360
CGGGGATTCA TGTGTGCAG AACCACCAGC ACAGTGTATC CGGTGCACTT GGGAAATTTG 6420
TCATGTAGCT TAGAAGGAAA TGCGTGGAAG AACTTGAGA CGCCCTTGTC ACCTCCAAGA 6480
TTTTCCATGC ATTCGTCCAT AATGATGGCA ATGGGCCAC GGGCGGCGC CTGGGCGAAG 6540
ATATTTCTGG GATCACTAAC GTCATAGTTG TGTTCAGGA TGAGATCGTC ATAGGCCATT 6600
TTTACAAAGC GCGGGCGGAG GGTGCCAGAC TGCGGTATAA TGGTTCCATC CGGCCAGGG 6660
GCGTAGTTAC CCTCACAGAT TTGCATTTC CACGCTTTGA GTTCAGATGG GGGGATCATG 6720
TCTACCTGCG GGGCGATGAA GAAAACGGT TCCGGGGTAG GGGAGATCAG CTGGGAAGAA 6780
AGCAGGTTCC TGAGCAGCTG CGACTTACCG CAGCCGGTGG GCGCGTAAAT CACACCTATT 6840
ACCGGGTGCA ACTGGTAGTT AAGAGAGCTG CAGCTGCCGT CATCCCTGAG CAGGGGGGCC 6900
ACTTCGTTAA GCATGTCCCT GACTCGCATG TTTTCCTGA CCAATCCGC CAGAAGGCGC 6960
TCGCCGCCCA GCGATAGCAG TTCTTGCAAG GAAGCAAAGT TTTTCAACGG TTTGAGACCG 7020
TCCGCCGTAG GCATGCTTTT GAGCGTTTGA CCAAGCAGTT CCAGGCGGTC CCACAGCTCG 7080
GTCACCTGCT CTACGGCATC TCGATCCAGC ATATCTCCTC GTTTCGCGGG TTGGGGCGGC 7140
TTTCGCTGTA CGGCAGTAGT CGGTGCTCGT CCAGACGGG CAGGGTCATG TCTTTCCACG 7200
GGCGCAGGGT CCTCGTCAGC GTAGTCTGGG TCACGGTGAA GGGGTGCGCT CCGGGCTGCG 7260
CGCTGGCCAG GGTGCGCTTG AGGCTGGTCC TGCTGGTGCT GAAGCGCTGC CGGTCTTCGC 7320
CCTGCGCGTC GGCCAGGTAG CATTTGACCA TGGTGTCATA GTCCAGCCCC TCCGCGGCGT 7380
GGCCCTTGGC GCGCAGCTTG CCCTTGAGG AGGCGCCGCA CGAGGGGCAG TGCAGACTTT 7440
TGAGGGCGTA GAGCTTGGGC GCGAGAAATA CCGATTCCGG GGAGTAGGCA TCCGCGCCGC 7500
AGGCCCCGCA GACGGTCTCG CATTCCACGA GCCAGGTGAG CTCTGGCCGT TCGGGGTCAA 7560
AAACCAGGTT TCCCCCATGC TTTTGTATGC GTTCTTACC TCTGGTTTCC ATGAGCCGGT 7620

GTCCACGCTC GGTGACGAAA AGGCTGTCCG TGTCCCCGTA TACAGACTTG AGAGGCCTGT 7680
CCTCGACCGA TGCCCTTGAG AGCCTTCAAC CCAGTCAGCT CCTTCCGGTG GGCGCGGGGC 7740
ATGACTATCG TCGCCGCACT TATGACTGTC TTCTTTATCA TGCAACTCGT AGGACAGGTG 7800
CCGGCAGCGC TCTGGGTCAT TTTCGGCGAG GACCGCTTTC GCTGGAGCGC GACGATGATC 7860
GGCCTGTGCG TTGCGGTATT CGGAATCTTG CACGCCCTCG CTCAAGCCTT CGTCACTGGT 7920
CCCGCCACCA AACGTTTCGG CGAGAAGCAG GCCATTATCG CCGGCATGGC GGCCGACGCG 7980
CTGGGCTACG TCTTGCTGGC GTTCGCGACG CGAGGCTGGA TGGCCTTCCC CATTATGATT 8040
CTTCTCGCTT CCGGCGGCAT CGGGATGCCC GCGTTGCAGG CCATGCTGTC CAGGCAGGTA 8100
GATGACGACC ATCAGGGACA GCTTCAAGGA TCGCTCGCGG CTCTTACCAG CCTAACTTCG 8160
ATCACTGGAC CGCTGATCGT CACGGCGATT TATGCCGCCT CGGCGAGCAC ATGGAACGGG 8220
TTGGCATGGA TTGTAGGCGC CGCCCTATAC CTTGTCTGCC TCCCCGCGTT GCGTCGCGGT 8280
GCATGGAGCC GGGCCACCTC GACCTGAATG GAAGCCGGCG GCACCTCGCT AACGGATTCA 8340
CCACTCCAAG AATTGGAGCC AATCAATTCT TCGGAGAAG TGTGAATGCG CAAACCAACC 8400
CTTGGCAGAA CATATCCATC GCGTCCGCCA TCTCCAGCAG CCGCACGCGG CGCATCTCGG 8460
GCAGCGTTGG GTCCTGGCCA CGGGTGCGCA TGATCGTGCT CCTGTCTGTTG AGGACCCGGC 8520
TAGGCTGGCG GGGTTGCCTT ACTGGTTAGC AGAATGAATC ACCGATACGC GAGCGAACGT 8580
GAAGCGACTG CTGCTGCAAA ACGTCTGCGA CCTGAGCAAC AACATGAATG GTCTTCGGTT 8640
TCCGTGTTTC GTAAAGTCTG GAAACGCGGA AGTCAGCGCC CTGCACCATT ATGTTCCGGA 8700
TCTGCATCGC AGGATGCTGC TGGCTACCCT GTGGAACACC TACATCTGTA TTAACGAAGC 8760
CTTCTCAAT GCTCACGCTG TAGGTATCTC AGTTCGGTGT AGGTCGTTCG CTCCAAGCTG 8820
GGCTGTGTGC ACGAACCCCC CGTTCAGCCC GACCGCTGCG CCTTATCCGG TAACTATCGT 8880
CTTGAGTCCA ACCCGGTAAG ACACGACTTA TCGCCACTGG CAGCAGCCAC TGGTAACAGG 8940
ATTAGCAGAG CGAGGTATGT AGGCGGTGCT ACAGAGTTCT TGAAGTGGTG GCCTAACTAC 9000
GGCTACACTA GAAGGACAGT ATTTGGTATC TCGCTCTGTC TGAAGCCAGT TACCTTCGGA 9060
AAAAGAGTTG GTAGCTCTTG ATCCGGCAAA CAAACCACCG CTGGTAGCGG TGGTTTTTTT 9120
GTTTGCAAGC AGCAGATTAC GCGCAGAAAA AAAGGATCTC AAGAAGATCC TTTGATCTTT 9180
TCTACGGGGT CTGACGCTCA GTGGAACGAA AACTCACGTT AAGGGATTTT GGTCATGAGA 9240
TTATCAAAAA GGATCTTCAC CTAGATCCTT TTAAATTAAA AATGAAGTTT TAAATCAATC 9300
TAAAGTATAT ATGAGTAAAC TTGGTCTGAC AGTTACCAAT GCTTAATCAG TGAGGCACCT 9360
ATCTCAGCGA TCTGTCTATT TCGTTCATCC ATAGTTGCCT GACTCCCCGT CGTGATGATA 9420
ACTACGATAC GGGAGGGCTT ACCATCTGGC CCCAGTGCTG CAATGATACC GCGAGACCCA 9480
CGCTCACCGG CTCCAGATTT ATCAGCAATA AACCAGCCAG CCGGAAGGGC CGAGCGCAGA 9540

0924297.022699

52

AGTGGTCCTG CAACTTTATC CGCCTCCATC CAGTCTATTA ATTGTTGCCG GGAAGCTAGA 9600
GTAAGTAGTT CGCCAGTTAA TAGTTTGCGC AACGTTGTTG CCATTGCTGC AGGCATCGTG 9660
GTGTACGCT CGTCGTTTGG TATGGCTTCA TTCAGCTCCG GTTCCCAACG ATCAAGGCGA 9720
GTTACATGAT CCCCCATGTT GTGCAAAAAA GCGGTTAGCT CCTTCGGTCC TCCGATCGTT 9780
GTCAGAAGTA AGTTGGCCGC AGTGTTATCA CTCATGGTTA TGGCAGCACT GCATAATTCT 9840
CTTACTGTCA TGCCATCCGT AAGATGCTTT TCTGTGACTG GTGAGTACTC AACCAAGTCA 9900
TTCTGAGAAT AGTGATGCG GCGACCGAGT TGCTCTTGCC CGGCGTCAAC ACGGGATAAT 9960
ACCGCGCCAC ATAGCAGAAC TTAAAAGTG CTCATCATTG GAAAACGTTT TTCGGGGCGA 10020
AAACTCTCAA GGATCTTACC GCTGTTGAGA TCCAGTTCGA TGTAACCCAC TCGTGCACCC 10080
AACTGATCTT CAGCATCTTT TACTTTCACC AGCGTTTCTG GGTGAGCAAA AACAGGAAGG 10140
CAAAATGCCG CAAAAAGGG AATAAGGGCG ACACGGAAAT GTTGAATACT CATACTCTTC 10200
CTTTTTCAAT ATTATTGAAG CATTTATCAG GGTATTGTC TCATGAGCGG ATACATATTT 10260
GAATGTATTT AGAAAAATAA ACAAATAGGG GTTCCGCGCA CATTTCCCCG AAAAGTGCCA 10320
CCTGACGTCT AAGAAACCAT TATTATCATG ACATTACCT ATAAAAATAG GCGTATCACG 10380
AGGCCCTTTC GTCTTCAA 10398

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

CATGGTAATA GCGATGACTA

20

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

GCTCTGCTTA TATAGACCTC

20

092497.02669

53

(2) INFORMATION FOR SEQ ID NO:4:

- (1) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

ATAAGCTGCA ATAAACAAGT

20

0024397.02669
0092307.0047260